



Patent  
Attorney's Docket No. 0023-0154

#14  
P. H. H. H.  
11/12/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of )  
)  
Dyckerhoff et al. ) Group Art Unit: 2667  
)  
Application No.: 09/534,838 ) Examiner: Alexander Boakye  
)  
Filed: March 24, 2000 )  
)  
For: BANDWIDTH DIVISION FOR )  
PACKET PROCESSING )

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NOV 14 2003

Technology Center 2600

RESPONSE TO RESTRICTION REQUIREMENT

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, Virginia 22202

Dear Sir:

Applicants' representative wishes to thank the Examiner's supervisor for the telephonic interview of November 12, 2003, in which the restriction requirement of October 14, 2003 was discussed. Applicants' representative further wishes to thank the Examiner's supervisor for agreeing that the restriction requirement is improper and will be withdrawn.

In a restriction requirement dated October 14, 2003, the Examiner required restriction under 35 U.S.C. § 121 among the following groups of claims:

- I. Claims 1-15, drawn to bandwidth allocation; and
- II. Claims 16-24, drawn to monitoring bandwidth consumption.

Applicants provisionally elect to prosecute Group I, claims 1-15, with traverse.

In the restriction requirement, the Examiner alleges that the inventions of Groups I and II are distinct because “[i]nventions I and II are unrelated” (restriction requirement, pg. 2). Applicants respectfully disagree.

Before addressing how the claims of Groups I and II are related, Applicants request that the restriction be withdrawn, or at least rewritten, on the grounds that the Office Action fails to state a basis for a proper restriction requirement. Although the Examiner correctly states the test for showing that inventions are unrelated, he then simply asserts that the claims of Groups I and II “have different functions and effects.” It is impossible for Applicants to determine, without more, why the Examiner believes that the invention in Group I has different functions and effects than the invention of Group II.

Indeed, the Examiner’s characterization of each group of claims is not even correct, and therefore cannot be a basis for a proper restriction. The Examiner characterizes Group I as drawn to bandwidth allocation. Group II is characterized as drawn to monitoring bandwidth consumption. A review of the claims, however, shows that the characterization of one group is also applicable to the other group. That is, Group I, in addition to being drawn to bandwidth allocation, also includes monitoring bandwidth consumption, which is how Group II is characterized. Similarly, Group II, in addition to being drawn to monitoring bandwidth consumption, also includes bandwidth allocation. Therefore, the basis for the restriction, the grouping of claims, is incorrect. For at least this additional reason, the restriction should be withdrawn.

Groups I and II are related and therefore are not distinct. Independent claim 1 recites:

A bandwidth divider for allocating bandwidth between a plurality of packet processors, comprising:

- (a) plurality of counters for measuring the bandwidth of data packets transferred from the bandwidth divider to a respective packet processor; and
- (b) a controller for analyzing the plurality of counters and; transferring a data packet to a selected packet processor based on the contents of the plurality of counters.

Claims 2-14 depend directly or indirectly from independent claim 1. Therefore, claims 1-14 of Group I recite measuring the bandwidth of data packets by using a group of counters (element a). Bandwidth consumption is monitored by counting the data packets transferred from a bandwidth divider to a respective packet processor. Bandwidth is then allocated by analyzing the counters and transferring a data packet to a selected one of the packet processors based on the contents of the counters (element b).

Independent claim 15 recites:

A router comprising:

- (a) a plurality of bandwidth dividers for receiving a first set of input streams and providing a first set of output streams;
- (b) a plurality of packet processors for receiving the first set of output streams from the bandwidth dividers and providing a second set of input streams;
- (c) a plurality of counters for monitoring the flow of data from the bandwidth dividers to the packet processors;
- (d) a controller for monitoring the counters and allocating the streams of data between the packet processors; and
- (e) a plurality of cross-bars for receiving the second set of input streams from the packet processors, multiplexing the second set of input streams, and providing a second set of output streams.

Therefore, independent claim 15 of Group I recites monitoring the flow of data (element c) and allocating streams of data between packet processors (element d). Applicants submit that claims 1-15 of Group I are drawn to monitoring of bandwidth consumption and bandwidth allocation.

Independent claim 16 recites:

A method of directing data packets to a plurality of packet processors, comprising the steps of:  
monitoring the bandwidth consumed by the packet processors;

determining, based on the bandwidth consumed by the packet processors, which packet processor has consumed the least amount of bandwidth;

allocating a next data packet to the packet processor which has consumed the least amount of bandwidth.

Claims 17-24 depend directly or indirectly from independent claim 16. Therefore, each of claims 16-24 of Group II recite a method of monitoring the bandwidth consumed by the packet processors (first step of claim 16) and allocating a next data packet to the packet processor (third step of claim 16). Applicants submit that claims 16-24 of Group II, like claims 1-15 of Group I, are drawn to monitoring of bandwidth consumption and bandwidth allocation.

Further, claim 1 of Group I recites counters for measuring bandwidth. Claims 17-24 of group II also recite counters for tracking bandwidth consumed by packet processors.

Applicants submit that, in view of the similarities between Group I and Group II, the two groups of claims are related and are therefore not distinct. In addition, in order for a restriction requirement to be proper, a serious burden with respect to the search and examination of all the claims must exist (MPEP 803.01). In this case, no such allegation was made. The search and examination of claims 1-24 do not create a serious burden. Therefore, Applicants respectfully request that the restriction requirement be withdrawn and that all pending claims, claims 1-24, be considered on their merits.

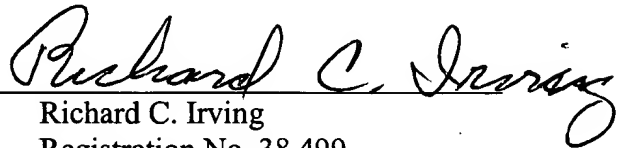
If the Examiner would like to discuss the restriction, he is encouraged to contact the undersigned at the number below.

To the extent necessary, a petition for an extension of time under 37 CFR 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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By:

  
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**AMENDMENT/REPLY TRANSMITTAL LETTER**

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2011 South Clark Place  
Customer Window, Mail Stop  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, Virginia 22202

Sir:

Enclosed is a reply for the above-identified patent application.

- ☐ A Petition for Extension of Time is also enclosed.
- ☐ A Terminal Disclaimer and a check for ☐ \$55.00 ☐ \$110.00 to cover the requisite Government fee are also enclosed.
- ☐ Applicant(s) request continued examination under 37 C.F.R. § 1.114 and enclose the ☐ \$370.00 ☐ \$740.00 fee due under 37 C.F.R. § 1.17(e).
- ☐ Applicant(s) previously submitted , on , for which continued examination is requested.
- ☐ A request for Entry and Consideration of Submission under 37 C.F.R. § 1.129(a) is also enclosed.

- ☒ No additional claim fee is required.
- ☐ An additional claim fee is required, and is calculated as shown below:

AMENDED CLAIMS					
	No. of Claims	Highest No. Of Claims Previously Paid For	Extra Claims	Rate	Additional Fee
Total Claims		Minus		x \$18.00 =	0
Ind. Claims		Minus		x \$ 86.00 =	0
If Amendment adds multiple dependent claims, add \$290.00					
Total Amendment Fee					0
If Small entity status is claimed, subtract 50% of Total Amendment Fee					
<b>TOTAL ADDITIONAL FEE DUE FOR THIS AMENDMENT</b>					<b>0</b>

- ☐ A claim fee in the amount of \$ \_ is enclosed.
- ☐ Charge \$ \_ to Deposit Account no. 50-1070.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

The Commissioner is hereby authorized to charge any other appropriate fees that may be required by this paper that are not accounted for above, and to credit any overpayment, to Deposit Account No. 50-1070.

Respectfully submitted,

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Date: November 13, 2003